A PSYCHOLOGICAL INQUIRY INTO THE RELATIONSHIP BETWEEN PEOPLE AND THE NATURAL ENVIRONMENT

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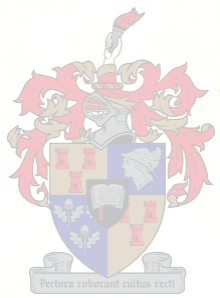

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STATEMENT

I, the undersigned, hereby declare that the work contained in this assignment is my own original work, and that I have not previously in its entirety or in part submitted it at any university for a degree.

SUMMARY

There has been a growing awareness of nature among psychologists in recent years, both in terms of how psychology can contribute to the preservation of nature, and utilise its benefits for human beings. In this paper both these aspects of the human-nature relationship are explored. The sense of connectedness between people and nature appears to be the common ground between these two approaches, and it is recommended that experiential as well as cognitive elements of the relationship should be recognised. A limited qualitative pilot study was conducted with five participants of a weekend wilderness experience. All the participants were female first year psychology students. Confirming previous research, this study found that the experience of nature is highly individualised, and includes heightened self-awareness, relaxation, social relationships, spiritual elements, and a sense of connectedness to nature.

OPSOMMING

Sielkundiges raak toenemend bewus van die natuur, in terme van die wyses waarop sielkunde kan bydra tot die beskerming van die omgewing, asook waarop die voordele wat dit vir die mens inhou, benut kan word. Beide aspekte van die verhouding tussen mens en natuur word in hierdie studie ondersoek. Die noue verbintenis tussen mens en natuur blyk die onderliggende faktor tot beide benaderings te wees, en dit word aanbeveel dat die eksperiënsiële sowel as kognitiewe elemente van hierdie verhouding in ag geneem moet word. 'n Beperkte kwalitatiewe loods-studie is uitgevoer met vyf deelnemers van 'n wildernes-ervaring, almal vroulike eerste-jaar sielkunde studente. In ooreenstemming met vorige navorsing het hierdie studie bevind dat die ervaring van die natuur hoogs geïndividualiseerd is, en verhoogde self-gewaarwording, ontspanning, sosiale verhoudings, spirituale elemente, en 'n sin van verbintenis aan die natuur, insluit.

CONTENTS

LIST OF TABLES

LIST OF FIGURES

A PSYCHOLOGICAL INQUIRY INTO THE RELATIONSHIP BETWEEN PEOPLE AND THE NATURAL ENVIRONMENT

1. INTRODUCTION

The ways in which human beings experience the natural environment has been a topic of growing interest among psychologists and other social scientists (Kaplan & Kaplan, 1989; Gardner & Stern, 1996). A substantial body of research supports the hypothesis that being in nature, or indeed, even having a view of nature, is beneficial for human beings (Gifford, 1997). The growing field of ecopsychology, especially, places much emphasis on our sense of connectedness to nature, as a source of emotional and psychological well-being. In South Africa, too, the psychological benefits of nature are being explored by organisations such as the South African Wilderness Therapy Initiative (SAWTI) (Robertson & Van Zyl, 1999) and Educo Africa (see Addendum A). The abundance of natural beauty in South Africa indeed offers a unique and indigenous setting for therapeutic, educational, and developmental activities. The range of foci includes personal growth, leadership development initiatives, and therapeutic intervention.

The way people experience nature is one way of examining the relationship between humans and the natural world. However, this relationship has also been studied extensively in the field of environmental psychology, operating from a social psychological base and focusing on the attitudes, beliefs and values that contribute to environmental concern and pro-environmental behaviour (for an extensive review, see Fransson & Gärling, 1999). Unfortunately, these two approaches have been operating largely unaware of each other (Reser, 1995). Since the *relationship* remains the central issue in both environmental psychology and ecopsychology-related approaches, collaboration between these could be mutually beneficial. Identification of the common ground between these approaches may enhance such collaboration, and ultimately strengthen the causes of both. It is proposed in this paper that the common ground exists in our *connectedness* to nature – both in terms of the experience thereof, and our beliefs about it.

In this paper, the relationship between humans and nature will be explored as an ongoing, interactive, mutually beneficial phenomenon. The meaning people derive from the experience of being in nature, as well as how people view the human-nature relationship, will be investigated. Not only does the survival of the planet depend on the behaviour of human beings, but nature may in turn hold psychological and other benefits for humans. The ultimate goal of this paper is to emphatically strengthen the relationship model put forward here, as a way of facilitating healing as well as growth, and to inform future research in this field in a practical, meaningful way.

A limited qualitative pilot study was conducted as a point of inception into this philosophical stream. The question explored is as follows: How does the experience of being in nature affect people's experience and perception of themselves, as well as their experience and perception of nature.

To the knowledge of the present author, little research has been conducted thus far in this country about the experience of nature. Although it seems plausible that this experience will be similar to that reported by researchers in other countries, the possibility of unique experiences in South Africa warrants investigation.

2. THE EXPERIENCE OF NATURE

Before embarking on this investigation, it is necessary to clarify what is meant by "nature". Qualitative analyses of how people conceptualise "nature" have shown that it is not a uniform concept. Mausner (1996) found that people differ, for instance, in their degree of perceived dichotomy between humans and nature, and warns researchers against the assumption that participants share a unitary definition of the concept. Researchers themselves differ in this regard. While some focus on completely unspoilt natural spaces with no evidence of human intrusion, others allude to the effects of "nearby nature", i.e. gardens, city parks, or even potplants (Kaplan & Kaplan, 1989). Nash (1967) comments on the tendency of wilderness to

be a state of mind, and finds it tempting to let the term define itself and accept as wilderness those places people call wilderness. While this may appear too open for some, it allows for the inclusive collation of varying attitudes that may be encountered. The research participants in the present study have experienced unspoilt wilderness, however, because of its inherent ambiguity, care was taken to let the term "nature" be defined according to the user.

Kaplan and Kaplan (1989) point out that the relationship between people and the natural environment spans a wide range of concerns. On a more pragmatic side nature provides mental as well as health benefits and has a restorative effect. On a more spiritual level, one that is perhaps often avoided in modern psychology, people often report a sense of "one-ness" or relatedness, and tranquillity when in nature. The spiritual and mundane seem to converge to a large degree in the context of natural environments.

The restorative effect that nature has on people has been well documented. Gifford (1997) summarises the many findings of previous research on the restorative effects of nature. These experiences and benefits are not sought or found in nature by everyone; neither is nature the only place where these can be found. Yet many people report the following reasons for seeking out nature:

- Escape from the rules and constraints of society;
- Experiencing nature, i.e. for its own sake;
- Ecosystem connectedness, i.e. being aware that people are part of the immensity of nature and the cosmos;
- Cognitive freedom, i.e. freedom to pay attention to whatever one likes;
- Growth in terms of knowledge and skills, self-knowledge, self-actualisation, or spirituality;
- Challenge, or the so-called adrenaline experience;
- Guidance, when responsibility for others is involved (e.g. being a camp leader);
- Social aspects, or experiencing social relationships of a different quality in a different context;

- Physical health (see Gifford (1997) for a review of studies that support the benefits of being in nature, or even having a view of nature, on mental and physical health);
- Self-control.

Mausner (1996) found much consistency in people's expectations of the experience of being in nature. Participants commonly referred to it as "peaceful, calm, relaxing, free, anonymous, and serene" (p. 343), and the experience seem to integrate physical, emotional, cognitive, and spiritual components.

Frederickson and Anderson (1999) found through qualitative enquiry that participants were moved to new spiritual heights as a result of their experiences in the wilderness. Participants had differing conceptualisations of spirituality, but tended to relate it to that which is meaningful to them. It included an intangible aspect and experiences of heightened sensory awareness, and it was not centred around organised religion. Furthermore, it appeared that the meaning they derived from a place, had as much to do with the visual appeal of the landscape, as with social interactions that occurred therein. This highlights the person-place interaction, and raises the interesting question whether different types of natural environment or vegetation may have different effects on people. It also remains unclear which comes first - feeling secure in a social setting, or feeling secure in the biophysical environment.

The experience of being in nature appears to be a truly holistic experience, with potential benefits in virtually every dimension of life. It may therefore be an exceptionally powerful resource for those who embrace a holistic view of humankind.

3. THEORETICAL EXPLANATIONS FOR THE BENEFITS OF NATURE

A brief overview of *what* people experience in nature has been given. Different attempts have been made to explain *why* and *how* these effects take place. Theories of social learning contend that love of nature is culturally learned, which means that its benefits derive from

being in a loved place. The affect-arousal approach claims that nature's benefits derive from the positive emotions it elicits in people, and that other calm, peaceful surroundings will have similar benefits. The research does not show strong support for either of these approaches (Gifford, 1997). According to another group of theories, nature *in itself* is the cause of its restorative qualities. These theories will be briefly summarised below.

3.1 Ecopsychology and the biophilia approach

The biophilia approach (Ulrich, 1993) takes a more affective stance. Evolutionary orientated, it explains why nature is restorative or healing by arguing that humans have developed in nature for far longer than they have lived in cities; therefore, being in nature is like "coming home", or being "where we belong". It focuses largely on affective responses to nature, such as stress-reduction and restorative effects, but also highlights the health benefits and positive effects on higher-order cognitive functioning associated with being in nature. It postulates that humans are characterised by a tendency to respond positively to nature, and that this tendency has developed through evolution and is therefore partly genetically based.

Ecopsychology is the name most often used for the emerging synthesis of psychology and ecology (Roszak, 1995). It places primary importance on the mutual relationship between humans and the environment and seeks to heal the alienation between them. The individual is not seen as separate, but as located within the natural world. It proceeds from the assumption that the psyche remains deeply connected to the earth as mother, and that psychological health is therefore related to a connectedness with nature. Ecopsychology can thus be seen to be largely based on the biophilia approach.

According to the principles of ecopsychology, the core of the mind is the ecological unconscious, the repression of which is seen as the deepest root of collusive madness in industrial society, while open access to it is the road to sanity. The contents of this ecological unconscious represent, at least in some way, the ordered complexity of cosmic evolution and the inter-dependant unfolding of physical, biological, mental and cultural systems. Just as

other therapies seek to uncover repressed contents of the unconscious and heal the alienation between person and person, ecopsychology seeks to awaken the sense of environmental reciprocity within the ecological unconscious, and heal the split between person and natural environment. It is believed that one is born with this almost enchanted sense of the world, and that it remains a desired characteristic of functionally 'sane' adults. The mature ecological ego feels a sense of ethical responsibility towards the planet, which is as vivid as the ethical responsibility to other people (Roszak, 1993).

Ecopsychology seeks to re-evaluate certain compulsively "masculine" traits such as power and domination, and therefore draws on some of the insights of ecofeminism and feminist spirituality to demystify sexual stereotypes. It questions the 'sanity' of large-scale, urban-industrial culture that suppresses the ecological ego, and supports small-scale social forms and personal empowerment without necessarily rejecting the positive, life-enhancing aspects of technological genius. Therefore, ecopsychology may be called post-industrial rather than anti-industrial. It furthermore argues that there is a synergistic interplay between planetary and personal well-being; that the needs of the person are the needs of the planet and the rights of the person are the rights of the planet (Roszak, 1993).

In his critical reflection on the future of ecopsychology and environmental psychology, and how these can contribute to each other, Reser (1995) notes that "the awareness level with respect to social and environmental psychology in the ecopsychology discourse... is virtually non-existent" (p.247). Yet ecopsychology, although often theoretical and speculative, rather than empirical, can contribute much to the field of psychology and specifically, environmental psychology - and vice versa. According to Reser, the *experiential* emphasis in ecopsychology, i.e. experiencing connectedness with nature, is simultaneously a strength and a limitation of the approach. It can be a powerful tool for behavioural change, but it ignores the complexity of information processing tools such as self-schemas, self-awareness, and self-attributions following behavioural change. Reser suggests that "the impact of the ecological crisis and motivational imperatives may need to be experienced at a local level and must register on one's cognitive, emotional and personal map of the world" (p. 250). On the other hand,

despite valuable contributions of environmental psychology to social problems like conservation and littering, these behavioural perspectives have not changed the way people think. For this to happen, Reser advocates addressing issues such as values, beliefs, the nature of concern, different cultural assumptions about human-biosphere interdependencies. According to Paul Stern (1992), one of the leading researchers in the field of environmental attitudes and behaviour, "[p]sychology is relevant to global environmental change because the current changes are largely anthropogenic in origin... The role of psychology is to improve the understanding of the function of individual and interpersonal behaviour in all of the human-environment relationships" (p.271-272).

3.2 The mental fatigue approach

The mental fatigue approach (Kaplan & Kaplan, 1989) takes a more cognitive viewpoint. It states that modern, everyday working and living environments constantly demand deciphering, processing and evaluation of relevant as well as irrelevant information. This requires what is termed *directed* attention. Contrary to this, nature compels one's involuntary or *non-directed* attention, because it is inherently fascinating. It thus provides a non-taxing environment which gradually restores and refreshes people when their directed attention becomes fatigued.

Kaplan's attention restoration theory provides an analysis of the kinds of experiences that leads to recovery from the fatigue of directed attention. It provides a framework for placing both directed attention, and stress recovery theories, in the larger context of human-environment relationships. Natural environments turn out to be particularly rich in the characteristics necessary for restorative experiences (Kaplan, 1995). It is concluded that both these benefits of restorative experiences in nature (i.e. stress reduction and recovery of focused attention) have an important role to play in an individual's functioning. Although distinct, they interact, and experience in natural environments can help to not only mitigate stress, but also prevent it, through aiding in the recovery of directed attention.

3.3 Gestalt psychology

Suttie (1984) views the value of the wilderness in terms of Gestalt psychology, specifically the work of Fritz Perls. Wilderness is seen as the ideal setting in which to maintain or regain one's organismic health and balance, because of its inherent healing powers. Its simplicity and impartiality – in contrast to an increasingly complex, value-governed society which causes people to lose their "inner voice" – make it an ideal setting for self-exploration and understanding. Nature facilitates many of the processes valued in Gestalt psychology, such as self-awareness, regaining contact with one's basic organismic needs, living in the present, i.e. opening up one's senses to be fully aware of what is happening around one, and freedom from the neurotic anxieties of modern life.

According to Swanson (1995), the Gestalt approach can make a valuable contribution to the ecopsychology movement, since they share many similarities. The Gestalt approach is based on the belief that enhanced awareness is the generic tool for personal growth. Nature provides a methodology for reconnecting with the body, and appears to enhance sensory awareness.

3.4 Jungian analysis

The symbolic power of nature is alluded to in the literature on the healing potential of nature. Wilderness may be seen as a metaphor for the unconscious, and therefore an ideal "hook" for the projection of unconscious feelings and trauma held in the body (Petrie, 1989). According to Robertson and Van Zyl (1999): "The experience of wilderness is ultimately an experience of oneness. The most basic of all the archetypes is the oneness with nature - the essential self. Wilderness evokes the experience of oneness, creating an opportunity to encounter the essential self" (p.5).

It is the belief of the present author that, in a holistic approach of human nature that embraces all aspects of the self (e.g. conscious and unconscious, rational and intuitive, physical and emotional), the importance of a sense of connectedness with nature to psychological and

spiritual health, becomes apparent. It is this sense of connectedness that lies at the bottom of both the well-being of the earth, i.e. environmental protection, and the well-being of human beings.

4. AN ENVIRONMENTAL PSYCHOLOGY PERSPECTIVE

In the field of environmental psychology, research has traditionally approached people-place interactions from one perspective, i.e. the effect of the environment on humans. This included, but was not restricted to natural environments. More recently, however, much research has also been directed from the opposite direction, namely the effect of humans on the environment. The attitudes people have towards nature or the natural environment has been studied extensively, as have related issues such as demographic variables or underlying value orientations that influence these attitudes and the willingness to act on them. A brief overview of the relevant literature follows.

4.1 Attitudes towards the environment

Environmental concern has been treated as both a specific attitude directly determining intentions, and more broadly as a general attitude or value orientation (Fransson & Gärling, 1999). Initial research about environmental attitudes has focused largely on demographic variables that influence these attitudes. This has also been the case in the limited number of studies conducted in Southern Africa in this regard, for example, level of education and income (Chanda, 1999; Willers, 1994); rural or urban dwelling (Chacko, 1998); ethnic group and language (Willers, 1994), and age (Msimango, 1988).

The correlation between environmental attitudes and other variables, such as ecological knowledge and actual behaviour, has been studied extensively (Fransson & Gärling, 1999). In South Africa, Chacko (1998) found the environmental knowledge of grade 10-12 learners on environmental issues to be poor, although slightly better in urban than in rural schools. This

was partly ascribed to more integrated teaching methods in urban schools. Msimango (1988) found high levels of ecological knowledge among Zulu-speaking pupils, who favoured the wise management of resources as opposed to a preservationist attitude. The younger participants (standard 6) expressed a greater willingness to take action, while the older group (standard 10) showed greater cognitive and conceptual knowledge. Both these South African studies found that the learners had difficulty applying whatever knowledge they had, to practical problems.

Because of social, cultural and/or political variables, the way environmental concern is expressed in one cultural or socio-economic group may not be relevant for another group. For instance, environmental concern is often depicted as a higher order concern in terms of Maslow's hierarchy of needs (Fransson & Gärling, 1999), whereby primary needs such as food and shelter has to be satisfied before higher order needs arise. Environmental concern is therefore often regarded as relevant only to high income groups. However, Dunlap and Mertig (1995) found in their 24-country survey that general national affluence was often negatively correlated with environmental concern. It is possible that environmental degradation is actually threatening primary needs in poorer countries. People in poorer communities may be more aware of the visible effects of pollution in their local context, than issues such as global warming (Mohai & Bryant, 1998; Taylor, 1989). Since research models are often based on predominantly white populations from developed countries, Willers (1994) concludes that a deeper understanding of what black South Africans understand as constituting the "environment" is needed before attempting to study their concern for it.

Factors influencing children's environmental attitudes include talking about the environment at home, reading about the environment, watching nature films (Eagles & Demare, 1999), outdoor educational and recreational experiences (Hanna, 1995), positive experiences in nature, the influence of family role models, environmental education, and membership of nature-related organisations (Chawla, 1999). These studies underline the importance of the childhood years in the formation of pro-environmental attitudes.

However, it is widely recognised in attitude theory that attitudes are not necessarily translated into behaviour, and that other variables are involved. A recent trend in the field of environmental psychology is to study the beliefs, values and worldviews that underlie environmental concern. The proposed relationship between these variables is represented in Figure 1 (Stern, Dietz & Guagnano, 1995). The social structures in which people are imbedded, shapes early experience and thus an individual's values and worldview. These influence more specific beliefs, which are in turn antecedent to personally held norms and intentions, and finally, behaviour. The original authors omitted causal arrows to allow for clarity of presentation, but believe that the directional flow in the figure is from top to bottom. The focus of the present study is mostly on the level of beliefs and worldviews.

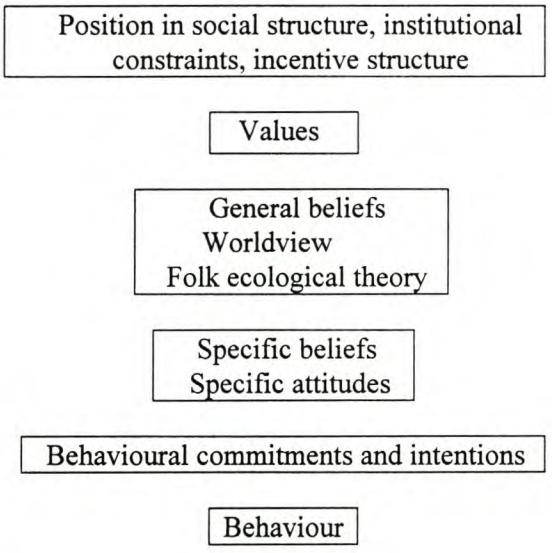

Figure 1. Schematic causal model of environmental concern.

Note: From "The new ecological paradigm in social-psychological context", by P.C. Stern, T. Dietz, and G.A. Guagnano, 1995, Environment and Behavior, 27, p.727. Copyright 1995 by Sage Publications.

Grob (1995) has found factual knowledge to be negligible in its influence on environmental behaviour, while personal-philosophical values and emotions were the most significant factors. Other important mediating factors in the relationship between attitudes toward the environment and actual behaviour, include locus of control (Fransson & Gärling, 1999),

beliefs of helplessness (Pelletier, Dion, Tuson, & Green-Demers, 1999) and incentives such as monetary benefits (Gardner & Stern, 1996). However, a fuller exploration of these is beyond the scope of the present study.

4.2 Beliefs underlying environmental concern

Different attempts have been made to describe beliefs about the environment, and the relationship of humans to it.

Stern and his colleagues have distinguished between egoistic, altruistic and biocentric value orientations that, in different ways, may lead to environmental concern (Stern et al., 1995; Stern, Dietz & Kalof, 1993). In an egoistic orientation, concern for the environment is based on the benefits it holds for oneself and one's children. An altruistic orientation is based on the benefits environmental protection holds for *all* people. Finally, a biocentric orientation refers to concern for the environment *for its own sake*. Nature is thus viewed as inherently valuable.

The New Environmental Paradigm (NEP), first referred to by Dunlap and Van Liere (1978), is an emerging belief system or worldview in industrialised countries which maintains that people are as much a part of nature as any other living thing, and consequently supports an awareness of our interconnectedness with nature. The authors contrast this with the prevailing, dichotomous Human Exception Paradigm (HEP), within which humans are perceived as superior to nature and entitled to use, dominate, and exploit it as they wish for their own benefit. The New Environmental Paradigm Scale has been developed to measure these more general, universal beliefs, and is widely used in the field of environmental research.

In an interesting study by Bechtel, Verdugo, and Pinheiro (1999), different responses to the NEP were obtained in different countries, implying a possible cultural effect on the way the environment is perceived. While nature and human growth was perceived as strictly dichotomous in the USA and Canada, this polarity was less pronounced in Mexico. Brazilian

participants did not see any dichotomy at all between the NEP and HEP - they simply recognised that they are different. The authors conclude that the strict dualism between nature and human growth could be more representative of industrialised countries, than developing ones. It may be of interest to see how, and if, this dichotomy manifests in South Africa.

Research on the awareness of the consequences of environmental damage found this construct to be an important predictor of pro-environmental behaviour (Stern et al., 1995). The Awareness of Consequences Scale (Stern et al., 1993) measures beliefs about consequences for oneself, other people, or the environment itself. It therefore distinguishes between egoistic, altruistic and biocentric value orientations, and is based on generalised beliefs about the environment. Although values are complex phenomena that cannot be done justice to in the scope of this paper, it may be noted here that the influence of values on environmental behaviour has been investigated it terms of Schwartz's model of universal values (Schwartz, 1994). The self-transcendence value cluster, which includes universalism and benevolence, has been positively correlated cross-culturally with pro-environmental attitudes and behaviour, while the "self-enhancement" cluster consisting of power and achievement, showed a negative correlation (Schultz & Zelezny, 1999; Stern, Dietz, & Guagnano, 1998; Stern, Dietz, Kalof & Guagnano, 1995).

Thompson and Barton (1994) distinguish between *ecocentric* motives for people's attitudes towards the environment, i.e. based on regarding nature as valuable for its own sake, and *anthropocentric* motives, i.e. a concern for nature based on concern for the welfare of people. They have developed the Environmental Attitude Scale to measure these concepts and have repeatedly found a stronger correlation between ecocentrism and pro-environmental behaviour, than with anthropocentrism (Bjerke & Kaltenborn, 1999; Thompson & Barton, 1994).

Banerjee and Mckeage (1994) conceptualise environmentalism as being in direct contradiction to the prevailing consumerist paradigm. According to their view, environmentalism includes:

- Beliefs about the interdependence of humanity and nature, and a rejection of the notion that humanity is to dominate nature;
- Beliefs about the importance of the environment to the self, i.e. a feeling of connectedness to nature, personal relevance, and interest in environmental issues;
- Beliefs that current environmental conditions are a serious problem facing the world;
- Beliefs that some radical changes in lifestyle and economic systems may be required to prevent further environmental damage.

These different concepts are all different attempts at understanding beliefs about the relationship between people and nature. The biocentric value orientation of Stern and his colleagues, the NEP, Thompson and Barton's ecocentric motivation, and Banerjee and Mckeage's environmentalism clearly bear close resemblance to each other. They all have in common a basic belief of nature as inherently valuable. Furthermore, they appear to be quite compatible with the principles of ecopsychology as described above. Although they originate from the study of environmental attitudes and have all been studied in relation to actual environmental behaviour, they are essentially attempts to define how people understand and experience this relationship, and where they position humanity in relation to nature.

To the knowledge of this researcher, these concepts have not been studied in South Africa to date.

4.3 Worldviews, religion and spirituality

One of the motivations for environmental concern is religion, or spirituality (Gardner & Stern, 1996). Different religions have different views on nature. In Hinduism and Buddhism, nature - and *all* forms of life - is revered as sacred, while beliefs about humanity's relationship to nature are so much a part of everyday life in many non-Western cultures, that one cannot conceive of it as 'religion' in the formalised sense. It is perhaps better understood as a 'worldview' of interconnectedness and interdependence between all forms of life.

Daneel (1998) reports on the religio-ecological movement in Zimbabwe, within which the earth is inextricably entwined with religious beliefs and rituals. A ritual tree-planting ceremony, *mafukidzanyika* ("clothing the land"), is used as an illustrative example of the way in which nature holds a central, often sacred place in these beliefs. Religio-environmental themes such as sense of place, sense of community (which includes deceased ancestors), renewal of human-earth relations, and awareness of divine presence, are salient in the traditional African worldview.

Some argue that the approach of ecopsychology may perhaps be more familiar to people in developing countries, than those in more affluent, industrialised parts, where confusion between primary and secondary needs often lead to complete alienation from nature. According to Cock (1996): "There is an ongoing struggle between using technology to reshape nature into commodities for meeting secondary satisfaction and shifting the attention back to rediscovery of the centrality of primary satisfaction, that is, rebuilding connections with nature through local communities" (p.196). Cock goes on to state that "[a] central issue facing environmental protection is how to draw on local cultural heritages that have minimal environmental impacts." (p.197). These cultural heritages may include those beliefs and values that recognise the healing potential of nature, or even the *necessity* of a sense of connectedness to nature for psychological and spiritual well-being.

Radical environmental ethics encompasses a number of different positions that have in common a politics of transformation (Hattingh, 1999). Deep ecology and ecofeminism are two prominent ethical/moral movements with some religious elements that will briefly be mentioned. The deep ecology movement originated from the work of Norwegian philosopher Arne Naess, and upholds a worldview that is nature-centred, and stresses the intrinsic value of non-human forms of life. It encourages a simpler, less materialistic lifestyle in harmony with nature, and opts for the spiritual notion of self-realisation through identification with the whole of the universe. The abundance and bio-diversity in nature is highly valued, while a decrease in human population as well as a drastic change in our consumption patterns, are called for (Hattingh, 1999).

Ecofeminism focuses on hierarchical, dualistic and patriarchal thought patterns that inform the domination and exploitation of women, as well as nature. These problems are seen to be reflective of the Western male paradigm, and its origins and societal perpetuation are traced through history. Organised religion, especially Judeo-Christian religions, as well as modern Western science, is seen as contributing to and upholding the dominant male-centred paradigm. Inter-relatedness, interconnectedness, nurturance and creativity are some of the qualities proposed to offer solutions to environmental problems as well as sexism, as opposed to the predominant culture of power hierarchy, dichotomy, domination and submission (Gardner & Stern, 1996). Hattingh (1999) points out that in some instances, this reconstruction of how we view gender as well as ecology has led to "a disappointing inversion of patriarchy" (p. 77) in which women are seen to occupy a privileged position with regards to nature. In other instances, however, ecofeminism has led to productive reappraisals of male-female and human-nature relationships.

Ecotheology is a contemporary development in Judeo-Christian religions, led by theologians such as Gelderloos (1992), that emphasises pro-environmental aspects of traditional scripture. It supports a stewardship philosophy of respect and care for the earth, and points out that misinterpretations and quotations out of context, has contributed to the view that Judeo-Christian scripture endorses exploitation of nature (Gardner & Stern, 1996). It highlights the religious and philosophical nature of the environmental cause.

The environmental and ecopsychology movement does indeed have a strong spiritual component, emphasising a reconnection with the natural world. Although religion and philosophical worldviews may play a very important role in the way people construct their relationship with nature, it has to be remembered that they alone will not solve the environmental problems presently facing the earth. Gardner and Stern (1996) point out that, despite the strong pro-environmental elements in religions like Hinduism, Taoism and Buddhism, countries like India and China have poor environmental records. This is attributed to factors like population growth, the adoption of Western ideas, industrial development, and

urbanisation. The strong influence of non-religious processes and obstacles is an important reason for the limitations of religious or moral approaches to behavioural change. The importance of other factors such as environmental awareness and education, financial incentives, and legislation, should not be lost sight of with regards to protecting our natural environment. In terms of strategies to change people's environmental behaviour, it is indeed the conclusion of Gardner and Stern (1996) that a *combination* of the major approaches to changing appears to have the most potential.

Two major approaches to the relationship between humans and nature have been reviewed: Ecopsychology, focusing on the experience of nature and its effect on people, and environmental psychology, focusing on the effect of humans on the environment and the factors influencing environmental concern and related behaviour. In attempting to strengthen the relationship model of human-nature-interconnectedness, it is proposed that the common ground between these two major streams of research is to be found in the connectedness between humans and nature – both in terms of the *experience* of it and *beliefs* about it. By recognising this common ground, an exchange of knowledge and wisdom between these different approaches can be enhanced, to the mutual benefit of environmental protection and psychological wellness, growth, or healing.

In order to provide a point of inception into the philosophical stream of our relationship with nature, and how it operates in a mutually beneficial way, a limited qualitative study was performed with the main purpose of informing future replicational work.

5. METHODOLOGY

5.1 Participants

The participants in this study were five volunteers from a group of first year psychology students, who embarked on the "Solo Experience" for the purpose of training as possible future assistants in the South African Wilderness Therapy Initiative (SAWTI). They were

recruited through their group convenor. The rationale for choosing this group was that they have had recent first-hand experience of being in nature, in contrast to their everyday environment, and are presumed to be able to articulate their experiences verbally in a way that will meaningfully inform this investigation. According to a SAWTI facilitator and researcher, Yoav van der Heyden, this has been found to be problematic in earlier attempts to interview inner city street youth that had been SAWTI participants (personal communication, 10 May 2001).

All five participants were female and between 18 and 20 years old. Three were white and two coloured, while three were English speaking, one was Afrikaans, and one bilingual (English and Afrikaans). While this is representative of the first year group from which they were selected, it has obvious implications for limiting the generalisability of the results. On the other hand, the homogeneous nature of the group allows for the replication of this pilot study on a more heterogeneous level, as the pilot study group has been established. This would allow for the extension of thematic categories for further investigation of this phenomenon. It may be added that the group that embarked on this specific Solo Experience was of mixed gender, however the male participants were post-graduate students.

5.2 The 'Solo' Wilderness Experience

A short description of the particular experience of this group is warranted. The main aim of the SAWTI is healing survivors of trauma, youth at risk, and other groups, through experiences in nature (Robertson, 1999). It thus uses one of South Africa's prime resources for a large number of people in need of psychological healing, as well as personal growth. The experience of the participants in the present study, who were not a traumatised group, was probably more that of growth than healing. However, these concepts are conceptualised as part of the same continuum

Theoretically, SAWTI draws from principles of Jungian psychology, especially the symbolic value of wilderness, as well as principles of ecopsychology. Its theoretical base also bears close resemblance to the Gestalt principles of self-awareness, and reconnecting with the body.

The 'Solo Experience' involves going away for a weekend to a wilderness setting, and spending about 12 hours alone in the wilderness on the Saturday. Participants are not allowed to take anything with them except for a notebook and pen (i.e. no food, cellular phones, radio's etc. were allowed). They are instructed to each go and find their own place to spend the day. At the end of the day the group reconvenes at the campsite, and experiences are shared. The organisers provide as little structure or guidelines as possible, acting only as facilitators of the process.

5.3 Method

Since the experience of nature and the meanings attached to it are highly subjective, a qualitative research design was chosen. Open-ended interviews were conducted, because of its potential to contextualise, empower the interviewee, and to do justice to the object of study (Smaling, 1994). Participants were all interviewed two weeks after the conclusion of the Wilderness Experience, to allow some distance from the actual event. Interviews were conducted individually by the researcher. Informed consent was obtained and all participants had given prior consent to having their conversation recorded. Only the following statement was used to guide the interviews, and was designed to be as open ended as possible, yet draw information about what was important to each participant in terms of their individual experience as well as the environment:

"I am interested in how you experienced being in nature during this trip; how you experienced the environment, and also how you experienced yourself in that setting."

The interviews were audio taped, transcribed, and analysed according to the phenomenological method. This method is based on the philosophical attitude of openness towards the world of human experience. It aims to describe as accurately as possible the phenomenon under study as experienced by the participants, and the meaning they attach to it (Giorgi, 1986). In contrast to the naturalistic attitude that rejects experience as subject matter because it is considered too subjective, and thus unreliable, the phenomenological approach values the subjective reality of the individual. It requires of the researcher to remain true to

whatever emerges from the data, rather than attempt to explain it according to a pre-existing framework. At the same time, it is recognised that the human element is always inextricably present in any research process. By taking into account and making explicit the presence of the researcher in the process, inter-subjective validity as far as similar future studies where researchers share the same theoretical approach, are concerned, is enhanced (Giorgi, 1986).

Its descriptive emphasis makes this a most appropriate methodology for the present explorative investigation. Bearing in mind the possibility that the responses of the participants were influenced by the researcher, or by their transference onto the researcher, objectivity was strived for throughout. In order to enhance external reliability, as well as content and concept validity, the data and analysis was subjected to peer examination. An independent masters level psychology student, familiar with the subject matter and research method, conducted this.

5.4 Content analysis

Once transcribed, the interviews were analysed according to the phenomenological method (Giorgi, 1986). This entailed firstly reading through each interview protocol as a whole in order to gain an intuitive, holistic understanding of the data. Thereafter, natural meaning units were identified as they appeared in the data. These meaning units were translated into 'psychological language', in this case informed by the literature on human-nature relationships. Common themes and categories were allowed to emerge from the data, changing and growing with consecutive reading until certain more important themes emerged. As a way of establishing as objectively as possible which themes may be regarded as more important than others, the number of times participants referred to each theme was collated (see Table 1). However, it is recognised that this only gives a rough indication of the relative emphasis each participant placed on a specific theme, and it should be regarded only as an attempt to make the data more accessible to the reader.

Table 1

Most Meaningful Aspects of Wilderness Experience

PARTICIPANT	A	B	C	D	E	TOTAL
Lack of distraction	1	6	2	5	4	**18**
Introspection and self-confrontation	3	7	2	4	2	**18**
Perspectives on/beliefs about the human-nature relationship	5	2	5	1	4	**17**
Relaxation	6	2	2	4	2	**16**
Tangible features of nature	2	4	4	3	3	**16**
Content, activities and events	1	1	2	1	8	**13**
Initial attitudes	1	6	1	2	2	**12**
Symbolism	2	2	2	2	4	**12**
Individual differences in experience	1	4	1	2	3	**11**
Previous experiences	3	2	1	4	1	**11**
Social relationships	-	2	3	4	2	**11**
Spirituality	1	-	3	4	3	**11**
References to nearby nature	2	4	-	1	-	**7**
Connectedness	2	-	3	1	-	**6**
Theory of wilderness	-	2	-	-	4	**6**
Physical health	-	-	-	2	1	**3**
Creativity	-	-	3	-	-	**3**
Other	-	4	2	2	3	**11**

6. RESULTS

One of the themes that emerged most strongly was the absence of distraction that participants experienced in nature. This led to introspection and self-confrontation, which constituted a greatly significant part of the experience for them. Participants all spoke of the distractions of

their everyday, busy lives, and how this often prevents them from focusing on their emotional lives. Given the solitary nature of the specific experience they had, this strong emphasis was to be expected. This would perhaps not be the case in the context of an interactional group. Participants agreed, though, that it was not only the solitude *per se* that led to introspection. They felt that being alone for the same time in a room, for instance, would probably be quite a different experience, because of many possible distractions. It is interesting to note that they did not perceive aspects of nature to be 'distracting'. This can be explained by the model of directed versus non-directed attention (Kaplan & Kaplan, 1989). Nature was simply enjoyed, or some form of personally relevant meaning was derived from it. It is possible that participants' *expectations* of the weekend as an opportunity for personal growth, contributed to the latter efforts. However, even those who were originally resistant or had negative attitudes towards the weekend, reported eventual introspection. It appears that the combination of prolonged solitude and being in nature acted as a powerful catalyst for self-examination and reflection in the participants.

Participants all commented on the relationship between humans and nature, and how the experience brought to the fore their views on it. It appears that most of these beliefs had already been present before the experience, but that they were reiterated, or perhaps made more conscious, by this experience of nature. Different aspects of the relationship that were mentioned included the importance of protecting natural areas, nature as "provider", and the relative smallness of humans compared to the "hugeness" of nature - without this being disempowering:

> *"It's just like these rolling hills, these huge rocks, and you're just like a little speck in this hugeness... But it wasn't scary, or I didn't feel useless, you know, like some people feel insignificant, or like they're sort of useless in amongst all this hugeness. I just sort of felt, I don't know, it was relaxing."*

> *"Obviously, it made you more aware [of] the importance of having places like that and that ... you shouldn't really tamper with everything... You can't really have that connection with yourself if there wasn't places like that."*

Previous experiences of nature, mostly social occasions with family and friends, seem to have played an important role in the present attitudes and beliefs of three participants with regard to nature. One explicitly stated how these beliefs were informed by her traditional cultural values. She had been taught by older generations that one must have respect for nature in order to allow it to act as a provider of basic needs such as food and medicinal herbs, as well as other benefits. The reciprocity of the relationship was therefore emphasised.

All the participants found being in nature relaxing. This theme received much emphasis. Most of them were already aware of this effect before this specific weekend, and associated nature with peace and quiet. The relaxing effect of 'nearby nature' (Kaplan & Kaplan, 1989) in their everyday lives, such as being in a park, having a view of trees, or sitting on the beach – even with a highway right behind it - was mentioned by three of the participants. One referred to what Kaplan and Kaplan (1989) terms "non-directed attention": *"Nature doesn't put many demands on you, so I go there for relaxation"*.[1] For three of the participants, previous experiences of nature were related to relaxing with family and friends, and of a more social nature. These social excursions, typically on weekends, were construed as a "get-away" or escape from daily tasks and activities. Although this may seem to indicate a measure of perceived dichotomy between nature and 'modern life', other confounding factors (e.g. social interaction; it being weekend or holiday) are involved which add to the above contrast. The awareness of 'nearby nature' also contradicts that these participants perceive a strict dichotomy between human activity and nature.

The physical or tangible features of nature played an important role in the experience for all of the participants, and evoked strong feelings and/or creative thoughts. Some reported feeling inspired or motivated by the beauty of nature. For some it was the more dramatic qualities

[1] Directly translated from Afrikaans.

like the powerful wind and a big *veld* fire they encountered along the way, while for others it was the rocks, or tiny little insects on a blade of grass, that made a significant impression on them. These differences appeared to be based on personality differences or even participants' mood during the time of the experience. This resonates with the view of nature as an ideal "hook" for the projection of feelings that have not found conscious expression (Petrie, 1989).

All of them also drew some sort of symbolic meaning from the physical features of nature:

> *"For example the wind, its blows lightly, and it blows a little harder, like... your moods, some days it is calm, some days it is like the wind... You can understand yourself better."*[2]
>
> *"...a lot of people thought about how like, just cycles in nature related very much to the cycles in their own life, how you can find that sort of correlation between things."*
>
> *"Many of us... had symbols of like, animals or something that came along... like an answer to a problem that you've been... struggling with for quite some time now."*

It was clear that the participants all had highly unique experiences of nature, and all of them also commented on this themselves. Two of the five initially had quite negative attitudes towards the weekend, and all five felt that the timing was somewhat inappropriate since they were busy with tests. However, for all of them the experience was ultimately rewarding. One participant, who viewed herself as the "most negative" participant, concluded that she greatly benefited from it even though she did not necessarily enjoy it at the time. The other participant that was initially somewhat negative, also felt that she didn't enjoy some aspects of the weekend, yet reported strong positive feelings while being alone in the wilderness. This suggests that something in the experience - whether it is the tangible, natural elements or the absence of distractions that forces one to confront oneself - had a strong positive impact regardless of initial attitude towards, or even enjoyment of the experience. It appears that the

[2] Directly translated from Afrikaans

quality of the experience was not necessarily different as a result of initial attitude, but rather as a result of different individual personalities and psychological processes. One participant, for instance, experienced the "effect" of the weekend only during the following week, while hearing about the experiences of others brought on insight into their own experience for another, and others found inspiration at the moment of being in nature. Some had very strong personal experiences, while others enjoyed it very much without experiencing what they termed "soul-shattering" insights.

Four of the participants had some kind of spiritual experience in nature. Some felt moved to "just speaking to God", while others spoke of the "awe-inspiring" vastness of nature and rediscovering their spiritual selves. These transcendental experiences seemed to interact with beliefs about the relationship between humans and the earth, making participants aware of humans being *part* of creation or of nature as inherently valuable.

Three participants also spontaneously spoke of a sense of connectedness to nature. One participant found that physically connecting with tangible aspects of nature facilitated more abstract connections, including emotional, spiritual and social:

> *"...that connectedness was sort of very important, connected to God, connected to yourself, connected to what was around you, and feeling connected to other people. You couldn't have that if you didn't sort of feel the rock... It's a real setting, it's not artificial, it's real... You can almost sort of trust it more, if that makes sense."*

The same participant reported that she was not consciously aware of these connections before this specific experience. Another felt that the connection grows stronger the more often one spends time in nature, and that the things one experiences in nature, stays with one afterwards. A sense of connectedness to previous generations or peoples who used to inhabit that specific land, was also reported by one participant, who felt that this transcendental-type experience was brought on by the timelessness of the surroundings.

Four participants found the social interactions in nature very important. They spoke of the new friends they made and how they had shared a unique experience during which they got to know each other quite well, perhaps on a deeper level than would have been possible otherwise. Being in nature allowed them to discard their social roles and "be themselves", thus encountering themselves - and as a result, each other - on a more authentic level.

Two participants recognised the effect of nature, as opposed to cities, on physical health, and spoke especially of the clean air. For one, nature was an invaluable source of creativity and inspiration in artistic endeavours.

Interestingly, two participants expressed some ambivalence with regards to the beauty of nature. Although nature evoked strong positive feelings in both, they appeared to look somewhat cynically onto the "pretty pictures" of nature, viewing beauty as somewhat of a luxury in contrast to the "harshness" of "reality" where issues like poverty and crime abound. This resonates with the understanding of environmental concern in terms of Maslow's hierarchy of needs, and since the socio-economic circumstances of the participants were such that all their basic needs were met, it seems to reflect a strong social awareness and a sense of social justice. This can be understood in terms of the participants' present status as psychology students.

This probably also accounts for the somewhat surprising finding that two participants expressed an interest in learning more about the theory of wilderness therapy, while three spontaneously mentioned the "unconscious" in relation to nature.

7. DISCUSSION AND CONCLUSION

This paper attempted to elucidate that which can contribute to enhancing the relationship between human beings and their natural environment, and our understanding of it, from both the experiential (e.g. ecopsychology) and social psychological perspectives. The relationship

itself is central to both, and a focus on our connectedness to nature seems to provide the common ground to these two approaches. In order to draw on the strengths of each approach, it is recommended that both the *experience* of connectedness to nature, and people's *beliefs* about it, should be taken into account when studying the human-nature relationship.

The pilot study, albeit small, confirms several of the research findings of studies performed in other countries. All of the participants found the experience to be of value in some way or another, and part of its value appears to be the fact that it is a truly holistically integrated experience. Affective experience as well as cognitive processing was operative for all the participants. Nevertheless, confirming Gifford's (1997) conclusion, their experiences of nature were highly individualised, and participants also commented on this themselves. These differences in experience could not be explained by different expectations or, given the homogenous nature of the group, by demographic variables. It is tentatively suggested that it rather seems to be the result of differences in personality or individual psychological processes.

At the same time, several common themes emerged. The most frequently mentioned themes were the absence of distraction in nature compared to participants' everyday, busy lives, and greater self-knowledge due to introspection. The *combination* of prolonged solitude and being in nature appeared to have facilitated this self-examination. The introspection brought on by periods of solitude was also noted by Frederickson and Anderson (1999). In their study, also with women only, both the value of positive social interaction and the actual immersion in the wilderness environment, was strongly emphasised by participants. This, as well as their findings of nature as a source of spiritual inspiration, and feelings of awe at the expansiveness of nature, was confirmed by the present study.

All the participants experienced nature as relaxing and calming, reiterating the results of Mausner (1996). The reports of participants offered tentative support for Kaplan and Kaplan's (1989) theory of non-directed attention as a way of understanding why nature is relaxing and restorative.

The symbolic meaning that participants extracted from certain features of nature, lends support to theories or approaches that work at the level of interface between the conscious and subconscious, and that draws on the symbolic value of nature (Robertson & Van Zyl, 1999). A strong element of projection appeared to be involved, especially in terms of the specific features of nature that participants found symbolically meaningful. Participants furthermore experienced a sense of connectedness to nature, as has been suggested in the theories outlined above and reported in the research literature (Gifford, 1997). Indeed, in accordance with the aim of SAWTI (Roberston, 1999), connections were established at various levels, i.e. with the environment, self, and others.

Some participants voiced views on the human-nature relationship that are compatible with the NEP, such as recognising our dependence on nature, the need to respect and protect our environment, and viewing humans as *part* of nature. Both ecocentric and anthropocentric motivations for these attitudes were voiced, i.e. that nature is inherently valuable, as well as valuable because of what it provides to human beings. Although the present methodology renders a quantitative comparison impossible, participants seemed to have placed more or less equal emphasis on these two motivations. This may suggest an awareness of the interactive nature of the relationship between people and the earth. It also appears that participants did not perceive nature as strictly dichotomous to human progress and development, as tentatively supported by the fact that value of nearby nature (Kaplan & Kaplan, 1989) was recognised.

Some participants spoke of their previous experiences of nature, which included relaxation with family or friends, solitude and an awareness of heightened creativity and spirituality. These experiences seem to have contributed to their present views of the relationship between people and the natural environment, again supporting previous results (Chawla, 1999; Hanna, 1995).

The present study investigated the experience of being in nature as well as the attitudes and beliefs people hold towards the environment. The essential link between protecting our

natural environment, and recognising its healing properties is perhaps best understood symbolically. Nature is symbolic of the unconscious, just as urban/built areas are symbolic of the conscious. This means that living completely separated from nature implies living without an important part of our selves. In a holistic approach of human nature that embraces all aspects of the self (e.g. conscious and subconscious, rational and intuitive, emotional and physical), the importance of a sense of connectedness to nature to psychological and spiritual wellness becomes apparent. It is this sense of connectedness that lies at the bottom of both the healing of the earth, i.e. environmental protection, and the healing of human beings. In the words of Robertson and Van Zyl (1999):

> "The struggle of preserve wilderness areas from the impact of humans has been essential in attempting to limit the activity of dominion over nature. The protection of wilderness is indeed the preservation of the psyche of the world. In some ways the demarcation of wilderness areas has become a perceived separation between wilderness and urban areas. As our understanding moves towards dominion in nature and our intrinsically creative spirituality develops, we realise the connectedness, and ultimate oneness, between ourselves and our environment, in all forms." (p.6).

8. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The limitations of this study include its small size, the fact that the participants were all female and only partially representative of the different cultural groups of South Africa, and the fact that they are psychology students, rather than a more representative sample of the broader society. They were also participants of a very specific type of wilderness experience, namely the "Solo Experience". The experience of nature might be quite different in other contexts. Furthermore, the specific wording of the opening statement to the interviews elicited more information about the direct experiences of participants, and perhaps to a lesser extent their cognitive perceptions of and beliefs about nature.

Nevertheless, as a pilot study into this area of research in South Africa, its contribution lies in the confirmation of results from other countries, as well as the provision of some form of base

line for further studies locally. A delineation of what is believed to be the most relevant areas for further research may provide some guidelines.

Continued evaluation of the experience and possible effect of wilderness programmes, or the therapeutic use of nature, is necessary. A qualitative methodology is deemed most appropriate to this end, especially initially, since there are so many different, possibly confounding variables involved. Individual accounts of such initiatives may have greater heuristic value, providing insight into the lived experience of nature. Studies similar to the pilot study presented here need to be extended to participants from different ages, cultures and gender. However, quantified data may be of helpful in answering remaining questions around issues such as the relationship between participant's expectations or demographic and personality variables, and their experience.

Such evaluative research should take into account the possible *interaction* between beliefs regarding human-nature interaction and the experience of nature. Do the beliefs people hold about nature influence their experience of nature, and vice versa? This may have important implications for wilderness therapy and related programmes. It is of interest to note that Hanna (1995) found a significant increase in eco-centric attitudes towards wilderness after ten- to eleven-day experiences in nature. However, the group who participated in a field ecology programme showed substantially stronger eco-centric attitudes than the group on an outdoor adventure programme. Deliberate attention to ecological knowledge and awareness obviously enhances these attitudes, and Hanna recommends that wilderness-type programmes include basic ecological concepts.

Empirical studies of the beliefs people have in South Africa, cross-culturally, of our relationship to nature, would also be of great value in further research concerning environmental attitudes and behaviour, as well as research on the interaction between beliefs and experiences in nature, as proposed above. Some of the available instruments that are deemed relevant to studying beliefs about our relationship to nature have been alluded to in the above literature review. To the knowledge of the author these instruments have not been

standardised, or indeed, used in South Africa to date. Do South Africans adhere to the beliefs put forward by, for instance, the NEP? Is environmental concern based on ecocentric or anthropocentric motivation, and how does this impact on related behaviour?

The possible differences in meanings attached to wilderness and nature amongst different cultural groups in South Africa warrant further investigation (Willers, 1994). The importance of socio-historic context in assessing relationship between majority groups and the environment needs to be recognised, as well as the influence of social movements such as rural-urban migration, and the role of rural wilderness areas as a means of survival (Ramphele & McDowell, 1991). The potential of wilderness as a context for rites of passage, as already explored by SAWTI (Robertson, 1999), appears to have implications for restorative healing as well as growth within indigenous peoples.

Axelrod and Suedfeld (1995) highlight the need for research on how changes in the natural world, such as loss of wilderness and species, as well as the interaction between humans and the natural world, such as human disconnectedness from nature, impact on people's emotional and psychological health. Methodologically, this could be a daunting task if attempted experimentally or empirically, because of a multitude of confounding factors. Qualitative approaches could, however, provide an insightful understanding of how people understand the effects of these on themselves.

Our sense of connectedness to nature may be under increasing threat in the face of our evolving society, despite having been a reality for humans for thousands of years. Rekindling it through a better understanding of the beliefs and experiences people have with regards to nature, and a growing awareness of these among psychologists, environmentalists, and other social scientists, may lead to new and innovative ways of approaching both the well-being of people, and the well-being of the earth.

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